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Substitute for form 1449A/B/PTO				Complete If Known	
				Application Number	Not Yet Assigned
				Filing Date	Concurrently Herewith
				First Named Inventor	Burkhard Kröger
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
Sheet	1	of	1	Attorney Docket Number	13111-00005-US

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)			
IC	BA	WO-93/17112	09-02-1993	Genencor International, Inc.	
BB	BB	WO-02/10206	02-07-2002	Degussa AG	
BC	BC	WO-2004/024932	03-25-2004	BASF Aktiengesellschaft	
BD	BD	WO-2004/024933	03-25-2004	BASF Aktiengesellschaft	

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NON PATENT LITERATURE DOCUMENTS					
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/525907-Conf. #5445
(Use as many sheets as necessary)				Filing Date	February 25, 2005
				First Named Inventor	Burkhard Kröger
				Art Unit	1632
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IC	AA*	US-5,175,108	12-29-1992	Bachmann et al.	
	AB*	US-4,601,893	07-22-1986	Cardinal	
	AC*	US-5,965,391	10-12-1999	Reinscheid et al.	
	AD*	US-4,489,160	12-18-1984	Katsumata et al.	
	AE*	US-5,158,891	10-27-1992	Takeda et al.	
	AF*	US-2003/0170775-A1	09-11-2003	Pompejus, et al.	
IC	AG*	US 10/511,302		Kröger et al.	

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		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)			
IC	BA	JP-10-229891-A	09-02-1998	Mitsubishi Rayon Co., Ltd.	
	BB	EP-1108790-A2	06-20-2001	Kyowa Hakko Kogyo Co., Ltd.	
	BC	WO-96/15246-A1	05-23-1996	Forschungszentrum Jülich GmbH	See US 5,965,391.
	BD	WO-03/100072-A2	12-04-2003	BASF Aktiengesellschaft	
	BE	WO-2003/087386-A3	10-23-2003	BASF Aktiengesellschaft	See US 10/511,302
	BF	EP-0472869-A2	03-04-1992	Degussa AG	See US 5,175,108.
IC	BG	DE-10046870-A1	03-28-2002	BASF Aktiengesellschaft	See US-2003/0170775-A1.

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IC	CA	KRÄMER, R., "Genetic and physiological approaches for the production of amino acids", Journal of Biotechnology, Vol. 45, 1996, pp. 1-21.			
	CB	MATTHEWS, R. G., ET AL., "Methylenetetrahydrofolate reductase and methionine synthase: biochemistry and molecular biology", Eur. J. Pediatr., Vol. 157, Suppl. 2, 1998, pp. S54-S59.			
	CC	TRIMMER, E. E., ET AL., "Methylenetetrahydrofolate Reductase from <i>Escherichia coli</i> : Elucidation of the Kinetic Mechanism by Steady-State and Rapid-Reaction Studies", Biochemistry, V. 1. 40, 2001, pp. 6205-6215.			
IC	CD	MATTHEWS, R. G., "Methylenetetrahydrofolate Reductase from Pig Liver", Methods in			

Examiner Signature	/Iqbal Chowdhury/ (05/08/2006)	Date Considered
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Substitute for form 1449A/B/PTO				Complete If Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/525907-Conf. #5445
(Use as many sheets as necessary)				Filing Date	February 25, 2005
				First Named Inventor	Burkhard Kröger
				Art Unit	1632
				Examiner Name	Not Yet Assigned
Sheet	2	of	4	Attorney Docket Number	13111-00005-US

IC		Enzymology, Vol. 122, pp. 372-381.	
	CE	SAHM, H., ET AL., "Pathway Analysis and Metabolic Engineering in <i>Corynebacterium glutamicum</i> ", <i>Biol. Chem.</i> , Vol. 381, 2000, pp. 899-910.	
	CF	EIKMANN, B. J., ET AL., "Molecular Aspects of lysine, threonine, and isoleucine biosynthesis in <i>Corynebacterium glutamicum</i> ", <i>Actaie van Leeuwenhoek</i> , Vol. 64, 1993, pp. 145-163.	
	CG	PEARSON, W. R., ET AL., "Improved tools for biological sequence comparison", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 85, 1988, pp. 2444-2448.	
	CH	NARANG, S. A., "Tetrahedron Report Number 140 - DNA Synthesis", <i>Tetrahedron</i> , Vol. 39, No. 1, 1983, pp. 3-22.	
	CI	ITAKURA, K., ET AL., "Synthesis and Use of Synthetic Oligonucleotides", <i>Ann. Rev. Biochem.</i> , Vol. 53, 1984, pp. 323-356.	
	CJ	ITAKURA, K., ET AL., "Expression in <i>Escherichia coli</i> of a Chemically Synthesized Gene for the Hormone Somatostatin", <i>Science</i> , Vol. 198, 1977, pp. 1056-1063.	
	CK	IKE, Y., ET AL., "Solid phase synthesis of polynucleotides. VIII. Synthesis of mixed oligodeoxyribonucleotides by the phosphotriester solid phase method", <i>Nucleic Acids Research</i> , Vol. 11, No. 2, 1983, pp. 477-488.	
	CL	ARKIN, A. P., ET AL., "An algorithm for protein engineering: Simulations of recursive ensemble mutagenesis", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 89, 1992, pp. 7811-7815.	
	CM	DELAGRAVE, S., ET AL., "Recursive ensemble mutagenesis", <i>Protein Engineering</i> , Vol. 6, No. 3, 1993, pp. 327-331.	
	CN	KOHARA, Y., ET AL., "The Physical Map of the Whole <i>E. coli</i> Chromosome: Application of a New Strategy for Rapid Analysis and Sorting of a Large Genomic Library", <i>Cell</i> , Vol. 50, 1987, pp. 495-508.	
	CO	WAHL, G. M., ET AL., "Cosmid vectors for rapid genomic walking, restriction mapping, and gene transfer", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 84, 1987, pp. 2160-2164.	
	CP	BOLIVAR, F., "Molecular Cloning Vectors Derived From The CoLE1 Type Plasmid pMB1", <i>Life Sciences</i> , Vol. 25, 1979, pp. 807-817.	
	CQ	VIEIRA, J., ET AL., "The pUC plasmids, an M13mp7-derived system for insertion mutagenesis and sequencing with synthetic universal primers", <i>Gene</i> , Vol. 19, 1982, pp. 259-268.	
	CR	GRANT, S. G. N., ET AL., "Differential plasmid rescue from transgenic mouse DNAs into <i>Escherichia coli</i> methylation-restriction mutants", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 87, 1990, pp. 4645-4649.	
	CS	SANGER, F., ET AL., "DNA sequencing with chain-terminating inhibitors", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 74, No. 12, 1977, pp. 5463-5467.	
	CT	STADEN, R., "The current status and portability of our sequence handling software", <i>Nucleic Acids Research</i> , Vol. 14, No. 1, 1986, pp. 217-231.	
	CU	MARCK, C., "DNA Strider": a 'C' program for the fast analysis of DNA and protein sequences on the Apple Macintosh family of computers", <i>Nucleic Acids Research</i> , Vol. 16, No. 5, 1988, pp. 1829-1836.	
	CV	BUTLER, B. A., "Sequence Analysis Using GCG", <i>Methods of Biochemical Analysis</i> , Vol. 39, 1998, pp. 74-97.	
	CW	LIEBL, W., ET AL., "Transfer of <i>Brevibacterium divaricatum</i> DSM 20297", "Brevibacterium flavum" DSM 20411, "Brevibacterium lactofermentum" DSM 20412 and DSM 1412, and <i>Corynebacterium lilium</i> DSM 20137 to <i>Corynebacterium glutamicum</i> and Their Distinction by rRNA Gene Restriction Patterns", <i>International Journal of Systematic Bacteriology</i> , Vol. 41, No. 2, 1991, pp. 255-260.	
IC	CX	BEN-BASSAT, A., ET AL., "Processing of the Initiator Methionine from Proteins: Properties of the <i>Escherichia coli</i> Methionine Aminopeptidase and Its Gene Structure", <i>Journal of Bacteriology</i> , Vol. 169, No. 2, 1987, pp. 751-757.	
IC	CY	O'REGAN, M., ET AL., "Cloning and nucleotide sequence of the phosphoenolpyruvate	

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				First Named Inventor	Burkhard Kröger
				Art Unit	1632
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Sheet	3	of	4	Attorney Docket Number	13111-00005-US

IC		carboxylase-coding gene of <i>Corynebacterium glutamicum</i> ATCC13032 ^a , Gene, Vol. 77, 1989, pp. 237-251.	
	CZ	SAHIN-TOTH, M., ET AL., "Cysteine scanning mutagenesis of the N-terminal 32 amino acid residues in the lactose permease of <i>Escherichia coli</i> ", Protein Sciences, Vol. 3, 1994, pp. 240-247.	
	CA1	HOCHULI, E., ET AL., "Genetic Approach to Facilitate Purification of Recombinant Proteins With a Novel Metal Chelate Adsorbent", Biotechnology, Vol. 6, 1988, pp. 1321-1325.	
	CB1	MARTIN, J.F., ET AL., "Cloning Systems in Amino Acid-Producing <i>Corynebacteria</i> ", Biotechnology, Vol. 5, 1987, pp. 137-146.	
	CC1	GUERRERO, C., ET AL., "Directed mutagenesis of a regulatory palindromic sequence upstream from the <i>Brevibacterium lactofermentum</i> tryptophan operon", Gene, Vol. 138, 1994, pp. 35-41.	
	CD1	TSUCHIYA, M., ET AL., "Genetic Control Systems of <i>Escherichia coli</i> Can Confer Inducible Expression of Cloned Genes in Coryneform Bacteria", Biotechnology, Vol. 6, 1988, pp. 428-430.	
	CE1	EIKMANNS, B. J., ET AL., "A family of <i>Corynebacterium glutamicum</i> / <i>Escherichia coli</i> shuttle vectors for cloning, controlled gene expression, and promoter probing", Gene, Vol. 102, 1991, pp. 93-98.	
	CF1	SCHWARZER, A., ET AL., "Manipulation of <i>Corynebacterium glutamicum</i> by Gene Disruption and Replacement", Biotechnology, Vol. 9, 1991, pp. 84-87.	
	CG1	REINSCHEID, D. J., ET AL., "Stable Expression of <i>hom-1-thrB</i> in <i>Corynebacterium glutamicum</i> and Its Effect on the Carbon Flux to Threonine and Related Amino Acids", Applied and Environmental Microbiology, Vol. 60, No. 1, 1994, pp. 126-132.	
	CH1	LABARRE, J., ET AL., "Gene Replacement, Integration, and Amplification at the <i>gdhA</i> Locus of <i>Corynebacterium glutamicum</i> ", Journal of Bacteriology, 1993, Vol. 175, No. 4, pp. 1001-1007.	
	CI1	MALUMBRES, M., ET AL., "Codon preference in <i>Corynebacteria</i> ", Gene, Vol. 134, 1993, pp. 15-24.	
	CJ1	JENSEN, P. R., ET AL., "Artificial Promoters for Metabolic Optimization", Biotechnology and Bioengineering, Vol. 58, 1998, pp. 191-195.	
	CK1	MAKRIDES, S. C., "Strategies for Achieving High-Level Expression of Genes in <i>Escherichia coli</i> ", Microbiological Reviews, Vol. 60, No. 3, 1996, pp. 512-538.	
	CL1	PATEK, M., ET AL., "Promoters from <i>Corynebacterium glutamicum</i> : cloning, molecular analysis and search for a consensus motif", Microbiology, 1996, Vol. 142, pp. 1297-1309.	
	CM1	SONNEN, H., ET AL., "Characterization of pGA1, a new plasmid from <i>Corynebacterium glutamicum</i> LP-6", Gene, Vol. 107, 1991, pp. 69-74.	
	CN1	SERWOLD-DAVIS, T. M., ET AL., "Localization of an origin of replication in <i>Corynebacterium diphtheriae</i> broad host range plasmid pNG2 that also functions in <i>Escherichia coli</i> ", FEMS Microbiology Letters, Vol. 66, 1990, pp. 119-124.	
	CO1	SIMON, R., ET AL., "A Broad Host Range Mobilization System for <i>In Vivo</i> Genetic Engineering: Transposon Mutagenesis in Gram Negative Bacteria", Biotechnology, Vol. 1, 1983, pp. 784-791.	
	CP1	SCHÄFER, A., ET AL., "Small mobilizable multi-purpose cloning vectors derived from the <i>Escherichia coli</i> plasmids pK18 and pK19: selection of defined deletions in the chromosome of <i>Corynebacterium glutamicum</i> ", Gene, Vol. 145, 1994, pp. 69-73.	
	CQ1	BERNARD, P., ET AL., "The F Plasmid CcdB Protein Induces Efficient ATP-dependent DNA Cleavage by Gyrase", J. Mol. Biol., V. I. 234, 1993, pp. 534-541.	
▼	CR1	SCHRUMPF, B., ET AL., "A Functionally Split Pathway for Lysine Synthesis in <i>Corynebacterium glutamicum</i> ", Journal of Bacteriology, V. I. 173, N. 14, 1991, pp. 4510-4516.	
IC	CS1	SPRATT, B. G., "Kanamycin-resistant vectors that are analogues of plasmids pUC8, pUC9,	

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IC	pEMBL8 and pEMBL9", Gene, Vol. 41, 1986, pp. 337-342.	
CT1	THIERBACH, G., ET AL., "Transformation of spheroplasts and protoplasts of <i>Corynebacterium glutamicum</i> ", Appl. Microbiol. Biotechnol., Vol. 29, 1988, pp. 356-362.	
CU1	DUNICAN, L. K., ET AL., "High Frequency Transformation of Whole Cells of Amino Acid Producing Coryneform Bacteria Using High Voltage Electroporation", Biotechnology, Vol. 7, 1989, pp. 1067-1070.	
CV1	TAUCH, A., ET AL., "Corynebacterium glutamicum DNA is subjected to methylation-restriction in <i>Escherichia coli</i> ", FEMS Microbiology Letters, Vol. 123, 1994, pp. 343-347.	
CW1	MOTOYAMA, H., ET AL., "Overproduction of L-Lysine from Methanol by <i>Methylobacillus glycogenes</i> Derivatives Carrying a Plasmid with a Mutated dapA Gene", Applied and Environmental Microbiology, Vol. 67, No. 7, 2001, pp. 3064-3070.	
CX1	EIKMANNS, B. J., "Identification, Sequence Analysis, and Expression of a <i>Corynebacterium glutamicum</i> Gene Cluster Encoding the Three Glycolytic Enzymes Glyceraldehyde-3-Phosphate Dehydrogenase, 3-Phosphoglycerate Kinase, and Triosephosphate Isomerase", Journal of Bacteriology, Vol. 174, No. 19, 1992, pp. 6076-6086.	
CY1	PATEK, M., ET AL., "Leucine Synthesis in <i>Corynebacterium glutamicum</i> : Enzyme Activities, Structure of <i>leuA</i> , and Effect of <i>leuA</i> Inactivation on Lysine Synthesis", Applied and Environmental Microbiology, Vol. 60, No. 1, 1994, pp. 133-140.	
CZ1	MALAKHOVA, I. I., ET AL., "Thin-Layer Chromatography of Free Amino Acids. Selection of Conditions for the Separation of L-Lysine, L-Homoserine, and L-Threonine", Biotehnologiya, Vol. 11, 1996, pp. 27-31.	
CA2	SCHMIDT, S., ET AL., "Near infrared spectroscopy in fermentation and quality control for amino acid production", Bioprocess Engineering, Vol. 19, 1998, pp. 67-70.	
CB2	LENNOX, E.S., "Transduction of Linked Genetic Characters of the Host by Bacteriophage P1", Virology, Vol. 1, 1955, pp. 190-206.	
CC2	TAUCH, A., ET AL., "The Erythromycin Resistance Gene of the <i>Corynebacterium xerosis</i> R-plasmid pTP10 Also Carrying Chloramphenicol, Kanamycin, and Tetracycline Resistances is Capable of Transposition in <i>Corynebacterium glutamicum</i> ", Plasmid, Vol. 33, 1995, pp. 168-179.	
CD2	LIEBL, W., ET AL., "High efficiency electroporation of intact <i>Corynebacterium glutamicum</i> cells", FEMS Microbiology Letters, Vol. 65, 1989, pp. 299-303.	
CE2	KASE, H., ET AL., "L-Methionine Production by Methionine Analog-resistant Mutants of <i>Corynebacterium glutamicum</i> ", Agr. Biol. Chem., Vol. 39, No. 1, 1975, pp. 153-160.	
IC	CF2	EIKMANNS, B. J., ET AL., "Nucleotide sequence, expression and transcriptional analysis of the <i>Corynebacterium glutamicum</i> <i>gltA</i> gene encoding citrate synthase", Microbiology, Vol. 140, 1994, pp. 1817-1828.

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